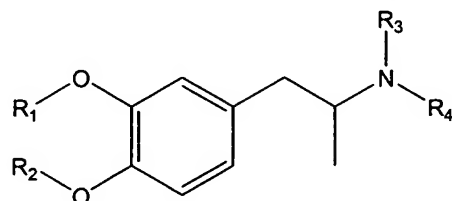


Claim Amendments

Please amend the claims as follows:

1. (currently amended) A compound of the formula:



Formula I

wherein: R^1 is H, lower alkyl, or a protecting group, ~~or is taken together with R^2 to form a ring,~~

R^2 is H, ~~lower alkyl, a protecting group, $-(CH_2)_nC(O)R^6$ or $-(CH_2)_nR^6$ or is taken together with R^1 to form a ring,~~

R^3 and R^4 are independently H or lower alkyl or a protecting group, ~~or, when R^1 is taken together with R^2 to form a ring, at least one of R^3 or R^4 is $-(CH_2)_nC(O)R^5$ or $-(CH_2)_nR^5$, or when R^1 is not taken together with R^2 to form a ring, at least one of R^3 and R^4 is not H or lower alkyl or a protecting group,~~

R^5 is H, ~~OH, SH, O lower alkyl, halogen, NH_2 , succinimidyl, maleimidyl, immunogenic carrier, or label,~~

R^6 is H, ~~-OH, -SH, -O lower alkyl, halogen, NH_2 , -succinimidyl, -maleimidyl, immunogenic carrier, or label, and~~

n is an integer from 1 to 5,

~~with the proviso that, when R^1 is CH_3 , R^2 is not $CH_2C(O)R^6$, and~~

~~with the proviso that, when R^1 is taken together with R^2 to form a ring and when only one of R^3 and R^4 is H or lower alkyl and the other of R^3 and R^4 is $-(CH_2)_nC(O)R^5$, R^5 is a protein, and including acid salts thereof.~~

2. (original) A compound according to Claim 1 wherein said immunogenic carrier is a poly(amino acid).

3. (original) A compound according to Claim 2 wherein said poly(amino acid) is a protein.

4. (original) Antibodies raised against the compound of Claim 3.

5. (original) A compound according to Claim 1 wherein n is 1.

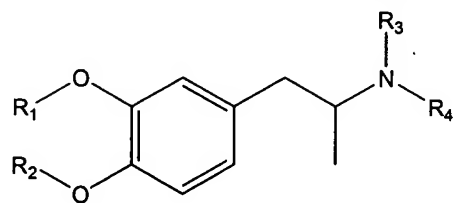
6. (currently amended) A compound according to Claim 1 wherein said label is an enzyme label, a luminescent label ~~luminescer~~, or a radioisotope label.

Claims 7-12 (canceled).

13. (currently amended) A method for determining a compound selected from the group consisting of 3,4-methylenedioxyamphetamine (MDA), 3,4-methylenedioxy-methamphetamine (MDMA), 3,4-methylenedioxyethylamphetamine (MDEA) and 4-hydroxy-3-methoxy-methamphetamine (HMMA), said method comprising:

(a) providing in combination in a medium:

- (i) a sample suspected of containing said compound and
- (ii) an antibody raised against a compound of the formula:



wherein: R^1 is H, or lower alkyl ~~or is taken together with R^2 to form a ring,~~
 R^2 is H, ~~lower alkyl,~~ $-(CH_2)_nC(O)R^6$ or $-(CH_2)_nR^6$, ~~or is taken together with R^1 to form a ring,~~
 R^3 and R^4 are independently H or lower alkyl, ~~or, when R^1 is taken together with R^2 to form a ring, at least one of R^3 or R^4 is $-(CH_2)_nC(O)R^5$ or $-(CH_2)_nR^5$, or when R^1 is not taken together with R^2 to form a ring, at least one of R^3 and R^4 is not H or lower alkyl,~~

~~R⁵ is an immunogenic carrier,~~

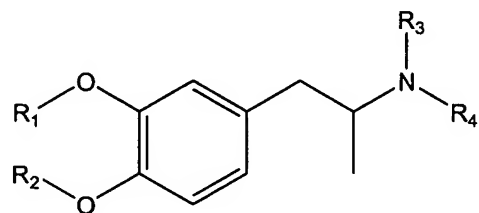
R⁶ is an immunogenic carrier, and

n is an integer from 1 to 5, and

(b) examining said medium for the presence a complex comprising said compound and said antibody, the presence thereof indicating the presence of said compound in said sample.

14. (original) A method according to Claim 13 wherein said combination further comprises:

(iii) a label conjugate of the formula:



wherein: R¹ is H, lower alkyl or is taken together with R² to form a ring,

R² is H, lower alkyl, $-(CH_2)_nC(O)R^6$ or $-(CH_2)_nR^6$, or is taken together with R¹ to form a ring,

R³ and R⁴ are independently H or lower alkyl, or, when R¹ is taken together with R² to form a ring, at least one of R³ or R⁴ is $-(CH_2)_nC(O)R^5$ or $-(CH_2)_nR^5$, or when R¹ is not taken together with R² to form a ring, at least one of R¹ and R² is not H or lower alkyl,

R⁵ is a label,

R⁶ is a label, and

n is an integer from 1 to 5, and

said examining comprises measuring signal from said label, the amount thereof being related to the presence of said compound in said sample.

15. (original) A method according to Claim 14 wherein said method is a homogeneous method and said medium is examined for the amount of said signal.

16. (original) A method according to Claim 14 wherein said method is a heterogeneous method and said complex, if present, is separated from said medium.

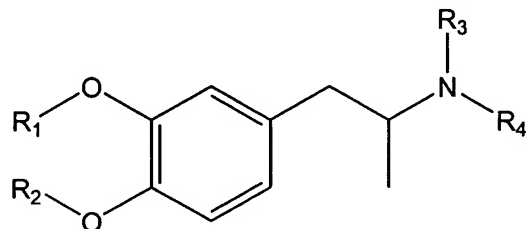
17. (original) A method according to Claim 14 wherein said protein is selected from the group consisting of KLH, BSA, BGG and ovalbumin.

18. (original) A method according to Claim 14 wherein n is 1.

19. (currently amended) A method according to Claim 15 wherein said label is an enzyme label, a luminescent label ~~luminescer~~, or a radioisotope label.

20. (currently amended) A kit for determining a compound selected from the group consisting of 3,4-methylenedioxyamphetamine (MDA), 3,4-methylenedioxy-methamphetamine (MDMA), 3,4-methylenedioxyethylamphetamine (MDEA) and 4-hydroxy-3-methoxymethamphetamine (HMMA), said kit comprising:

(a) an antibody raised against a compound of the formula:

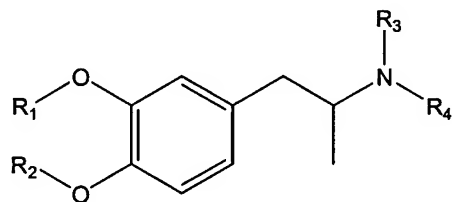


wherein: R^1 is H, or lower alkyl ~~or is taken together with R^2 to form a ring,~~
 R^2 is H, ~~lower alkyl,~~ $-(CH_2)_nC(O)R^6$ or $-(CH_2)_nR^6$, ~~or is taken together with R^1 to form a ring,~~
 R^3 and R^4 are independently H or lower alkyl, ~~or, when R^1 is taken together with R^2 to form a ring, at least one of R^3 or R^4 is $-(CH_2)_nC(O)R^5$ or $-(CH_2)_nR^5$, or when R^1 is not taken together with R^2 to form a ring, at least one of R^3 and R^4 is not H or lower alkyl,~~
 R^5 is an immunogenic carrier,
 R^6 is an immunogenic carrier, and
n is an integer from 1 to 5, and

- (b) ancillary reagents for determining said compound.

21. (currently amended) A kit for determining a compound selected from the group consisting of 3,4-methylenedioxyamphetamine (MDA), 3,4-methylenedioxy-methamphetamine (MDMA), 3,4-methylenedioxyethylamphetamine (MDEA) and 4-hydroxy-3-methoxymethamphetamine (HMMA), said kit comprising:

- (a) an antibody for said compound,
 (b) a label conjugate of the formula:



- wherein: R^1 is H, or lower alkyl ~~or is taken together with R^2 to form a ring,
 R^2 is H, ~~lower alkyl,~~ $-(CH_2)_n C(O)R^6$ or $-(CH_2)_n R^6$, ~~or is taken together with R^1 to form a ring,~~
 R^3 and R^4 are independently H or lower alkyl, ~~or, when R^1 is taken together with R^2 to form a ring, at least one of R^3 or R^4 is $-(CH_2)_n C(O)R^5$ or $-(CH_2)_n R^5$, or when R^1 is not taken together with R^2 to form a ring, at least one of R^3 and R^4 is not H or lower alkyl,~~
 R^5 is a label,
 R^6 is a label, and
 n is an integer from 1 to 5,
 (c) ancillary reagents for determining said compound.~~

22. (original) A kit according to Claim 20 wherein said protein is selected from the group consisting of KLH, BSA, BGG and ovalbumin.

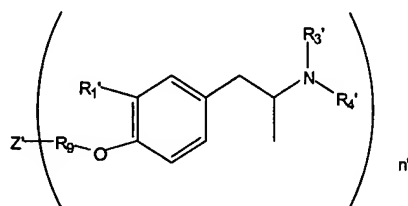
23. (original) A kit according to Claim 20 wherein n is 1.

24. (currently amended) A kit according to Claim 21 wherein said label is an enzyme

label, a luminescent label ~~luminescer~~, or a radioisotope label.

25. (original) A method for determining amphetamine and/or methamphetamine and/or methylenedioxyamphetamine in a sample suspected of containing methylenedioxyamphetamine and/or methylenedioxymethamphetamine and/or methylenedioxyamphetamine, said method comprising:

- (a) providing in combination in a medium:
 - (i) said sample,
 - (ii) an antibody for methylenedioxyamphetamine, and/or
 - (iii) an antibody for methylenedioxymethamphetamine, and/or
 - (iv) an antibody for methylenedioxyamphetamine, and
 - (v) a compound of the formula:



wherein:

$R^{1'}$ is H, or methyl or ethyl

$R^{3'}$ is H,

$R^{4'}$ is H, or methyl or ethyl,

$R^{9'}$ is $-(CH_2)_nC(O)R^{6'}$ or $-(CH_2)_nR^{6'}$,

$R^{6'}$ is Z' , which is an enzyme,

n' is an integer between 1 and the molecular weight of said enzyme divided by about 500;

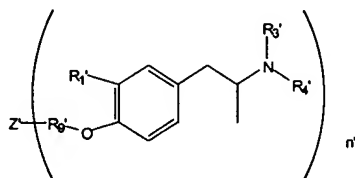
and

(b) examining said medium for the presence of a complex comprising said methylenedioxyamphetamine and said antibody for methylenedioxyamphetamine and/or a complex of said methylenedioxymethamphetamine and said antibody for methylenedioxymethamphetamine and/or a complex of said methylenedioxyamphetamine and said antibody for methylenedioxyamphetamine, the presence thereof indicating the presence of said methylenedioxyamphetamine and/or methylenedioxymethamphetamine and/or methylenedioxyamphetamine in said sample.

Claim 26 (canceled).

27. (currently amended) A method for determining methylenedioxyamphetamine and/or methylenedioxymethamphetamine and/or methylenedioxyethamphetamine in a sample suspected of containing methylenedioxyamphetamine and/or methylenedioxymethamphetamine and/or methylenedioxyethamphetamine, said method comprising:

- (a) providing in combination in a medium:
 - (i) said sample,
 - (ii) a conjugate of an enzyme and a methylenedioxyamphetamine analog and/or a conjugate of an enzyme and a methylenedioxymethamphetamine analog and/or a conjugate of an enzyme and a methylenedioxyethamphetamine analog,
 - (i) an antibody for methylenedioxyamphetamine, said antibody being raised against a compound of the formula:

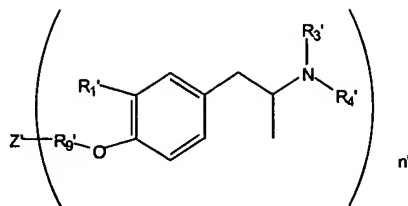


wherein:

- R^1 is H, or methyl or ethyl
- R^3 is H,
- R^4 is H,
- R^9 is $-(CH_2)_nC(O)R^6$ or $-(CH_2)_nR^6$,
- R^6 is Z' , which is an ~~immunogenic~~ protein immunogenic carrier or a non-poly(amino acid) immunogenic carrier,

n' is an integer between 1 and the molecular weight of said ~~immunogenic~~ protein immunogenic carrier or said non-poly(amino acid) immunogenic carrier divided by about 500; and/or

- (iv) an antibody for methylenedioxymethamphetamine, said antibody being raised against a compound of the formula:



wherein:

$R^{1'}$ is H, or methyl or ethyl

$R^{3'}$ is H,

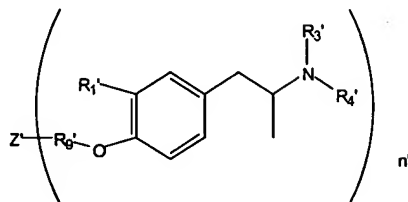
$R^{4'}$ is methyl,

$R^{9'}$ is $-(CH_2)_nC(O)R^{6'}$ or $-(CH_2)_nR^{6'}$,

$R^{6'}$ is Z' , which is an ~~immunogenic~~ protein immunogenic carrier or a non-poly(amino acid) immunogenic carrier,

n' is an integer between 1 and the molecular weight of said ~~immunogenic~~ protein immunogenic carrier or said non-poly(amino acid) immunogenic carrier divided by about 500; and/or

(v) an antibody for methylenedioxyethamphetamine, said antibody being raised against a compound of the formula:



wherein:

$R^{1'}$ is H, or methyl or ethyl

$R^{3'}$ is H,

$R^{4'}$ is ethyl,

$R^{9'}$ is $-(CH_2)_nC(O)R^{6'}$ or $-(CH_2)_nR^{6'}$,

$R^{6'}$ is Z' , which is an ~~immunogenic~~ protein immunogenic carrier or a non-poly(amino acid) immunogenic carrier,

n' is an integer between 1 and the molecular weight of said ~~immunogenic~~ protein immunogenic carrier or said non-poly(amino acid) immunogenic carrier divided by about 500; and

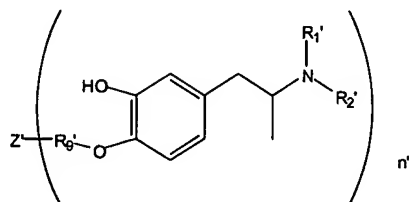
(b) examining said medium for the presence of a complex comprising said

methylenedioxyamphetamine and said antibody for methylenedioxyamphetamine and/or a complex of said methylenedioxymethamphetamine and said antibody for methylenedioxymethamphetamine and/or a complex of said methylenedioxyethamphetamine and said antibody for methylenedioxyethamphetamine, the presence thereof indicating the presence of said methylenedioxyamphetamine and/or methylenedioxymethamphetamine and/or methylenedioxyethamphetamine in said sample.

Claims 28-29 (canceled).

30. (currently amended) A kit comprising in packaged combination:

- (i) an antibody for methylenedioxyamphetamine,
- (ii) an antibody for methylenedioxymethamphetamine, and/or
- (iii) an antibody for methylenedioxyethamphetamine, and
- (iv) a compound of the formula:



wherein:

- R^1 is H,
- R^2 is H, or methyl or ethyl,
- R^9 is $-(CH_2)_nC(O)R^5$ or $-(CH_2)_nR^5$,
- R^5 is Z' , which is an ~~immunogenic~~ protein immunogenic carrier or a non-poly(amino acid) immunogenic carrier,
- n' is an integer between 1 and the molecular weight of said ~~immunogenic~~ protein immunogenic carrier or said non-poly(amino acid) immunogenic carrier divided by about 500.

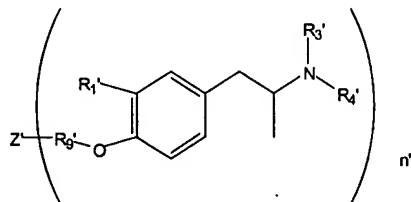
31. (currently amended) A kit comprising in packaged combination:

- (i) a conjugate of an enzyme and a methylenedioxyamphetamine analog and/or a conjugate of an enzyme and a methylenedioxymethamphetamine analog, and/or

a conjugate of an enzyme and a methylenedioxyamphetamine analog, and

(ii) an antibody for methylenedioxyamphetamine, said antibody

being raised against a compound of the formula:



wherein:

R^{1'} is H, or methyl or ethyl

R^{3'} is H,

R^{4'} is H,

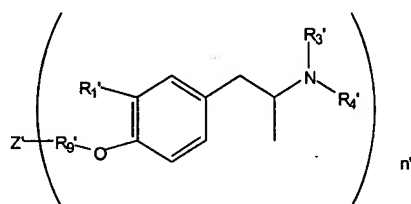
R^{9'} is $-(\text{CH}_2)_n\text{C(O)R}^{6'}$ or $-(\text{CH}_2)_n\text{R}^{6'}$,

R^{6'} is Z', which is an ~~immunogenic~~ protein immunogenic carrier or a non-poly(amino acid) immunogenic carrier,

n' is an integer between 1 and the molecular weight of said ~~immunogenic~~ protein immunogenic carrier or said non-poly(amino acid) immunogenic carrier divided by about 500; and/or

(iii) an antibody for methylenedioxymethamphetamine, said antibody being

raised against a compound of the formula:



wherein:

R^{1'} is H, or methyl or ethyl

R^{3'} is H,

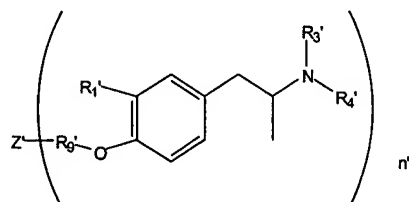
R^{4'} is methyl,

R^{9'} is $-(\text{CH}_2)_n\text{C(O)R}^{6'}$ or $-(\text{CH}_2)_n\text{R}^{6'}$,

R^{6'} is Z', which is an ~~immunogenic~~ protein immunogenic carrier or a non-poly(amino acid) immunogenic carrier,

n' is an integer between 1 and the molecular weight of said ~~immunogenic~~ protein immunogenic carrier or said non-poly(amino acid) immunogenic carrier divided by about 500, and/or

(iv) an antibody for methylenedioxyethamphetamine, said antibody being raised against a compound of the formula:



wherein:

R^1 is H, or methyl or ethyl

R^3 is H,

R^4 is ethyl,

R^9 is $-(CH_2)_nC(O)R^6$ or $-(CH_2)_nR^6$,

R^6 is Z' , which is an ~~immunogenic~~ protein immunogenic carrier in or a non-poly(amino acid) immunogenic carrier,

n' is an integer between 1 and the molecular weight of said ~~immunogenic~~ protein immunogenic carrier or said non-poly(amino acid) immunogenic carrier divided by about 500.

Claim 32 (canceled).